

Response under 37 C.F.R. §1.114
Serial No. 10/771,391
Attorney Docket No. 042080

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (Previously presented): A method of manufacturing a semiconductor device comprising, in the recited order, the steps of:

 forming an insulating film on a surface of a semiconductor element or a circuit wiring board having electrodes on the surface thereof;

 forming openings in the insulating film by patterning the insulating film and then removing portions of the insulating film above the electrodes;

 supplying a first metal into the openings;

 heating the first metal to melt and coagulate the first metal;

 supplying a second metal into the openings on the first metal;

 heating the first metal and the second metal to melt and coagulate the first metal and the second metal; and

 removing the insulating film.

2. (Original): A method of manufacturing a semiconductor device according to claim 1, wherein the first metal and the second metal are supplied into the openings by an electrolytic plating method or a vapor-deposition method.

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3. (Original): A method of manufacturing a semiconductor device according to claim 1, wherein the first metal has a characteristic in which a volume thereof is increased when it is heated to be molten and coagulated.

4. (Original): A method of manufacturing a semiconductor device according to claim 3, wherein the first metal contains as a component thereof Bi or an alloy including Bi as a primary component.

5. (Original): A method of manufacturing a semiconductor device according to claim 4, wherein a content of Bi in the first metal is in the range from 20 to 70 wt% of the sum of the first metal and the second metal.

6. (Original): A method of manufacturing a semiconductor device according to claim 1, wherein the second metal contains as a component thereof at least one of Sn, Ag, In, Cu, Zn and Sb.

7. (Original): A method of manufacturing a semiconductor device according to claim 1, wherein the second metal is formed to such a height that it protrudes from the opening.

8. (Original): A method of manufacturing a semiconductor device according to claim 1, wherein the insulating film comprises a dry film resist.

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9. (New): A method of manufacturing a semiconductor device according to claim 1, wherein the first metal and the second metal are supplied into the openings by an electrolytic plating method.